

**10/525,546**  
**Notice of Allowability**

Application No.

10/525,546

Examiner

Lun-See Lao

Applicant(s)

IKEUCHI ET AL.

Art Unit

2615

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 02-24-2005.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Introduction*

1. This action responds to APPLICATION filed on 02-24-2005. Claims 1-8 are pending.

### ***Allowable Subject Matter***

2. Claims 1-8 are allowed.

3. The following is an examiner's statement of reasons for allowance:

4. Prior art of record such as Holl (US PAT 5,181,247) teaches a speaker system for picture receiver, comprising:

a first speaker for reproducing medium and high range sound which form a sound image nearly at the vertical center in the right and left region of the screen of a picture receiver; and

a second speaker for reproducing medium and low range sound under the screen, wherein when a listening point is set at a point a first distance apart in forward direction of the screen and within a second distance from the front axis at the center of the right and the left of the screen, distance R1 from the sound source position of the first speaker to the listening point, distance R2 from the sound source position of the second speaker to the listening point, and crossover frequency  $f$  of the first speaker and the second speaker frequency-divided by dividing network satisfy .

However, non of the prior of record teaches that "a listening point is set at a point a first distance apart in forward direction of the screen and within a second distance from the front axis at the center of the right and the left of the screen, distance R1 from the

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sound source position of the first speaker to the listening point, distance R2 from the sound source position of the second speaker to the listening point, and crossover frequency f of the first speaker and the second speaker frequency-divided by dividing network satisfy the following relative formula:

$$| \exp(-j \times k \times R1) \times \exp(j \times D \times \pi/4) + (-1)^{D+1} \times \exp(-j \times k \times R2) \times \exp(-j \times D \times \pi/4) | \geq 1/\sqrt{2} ,$$

$$k = 2\pi \times f/c,$$

exp = exponential function,

j = unit of complex number,

c = sound velocity,

$\pi$  = circular constant,

D = degree of dividing network (0 or positive integers)" as recited in independent claim 1.

These limitations, in combination with the remaining limitations of independent claim 1, are not taught nor suggested by the prior art of record.

Independent claim 5 is allowable for similar reason as claim 1.

Dependent claims 2-4 and 6-8 are dependent to independent claims 1 and 5 respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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**Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suzuki (US PAT. 4,860,363), Modafferi (US PAT 4,403,112), Oyaba (US PAT 4,991,687), Koizumi (US PAT 5,448,647), Tamayama (US 2002/0048381) and YAMADA (JP-272299) are cited to show other related SPEAKER SYSTEM FOR VIDEO RECEIVER AND METHOD FOR INSTALLING SPEAKER.

7. Any response to this action should be mailed to:

Mail Stop \_\_\_\_ (explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:  
**(571) 273-8300**

Hand-delivered responses should be brought to:  
Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (571) 272-7501. The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao,Lun-See L.S.

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Patent Examiner  
US Patent and Trademark Office  
Knox  
571-272-7501  
Date 11-07-2006



VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600